



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
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November 28, 2007

Chief, Rules, Directives and Editing Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

RE: EPA Review and Comments
Draft Environmental Impact Statement (DEIS)
Vogtle Electric Generating Plant Site
Issuance of an Early Site Permit (ESP) for
Construction and Operation of a New Nuclear Power Generating Facility
NUREG-1872
CEQ No. 20070386

Dear Sir:

The U.S. Environmental Protection Agency (EPA) reviewed the subject Draft Environmental Impact Statement (DEIS) pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act. The document provides information to educate the public regarding general and project-specific environmental impacts and analysis procedures, and follows the public review and disclosure aspects of the NEPA process. This letter informs you of the results of our review.

Southern Nuclear Operating Company, Inc. (Southern) applied for an early site permit (ESP) for the Vogtle Electric Generating Plant (VEGP) site, co-located with the existing Vogtle facility. The proposed action is to approve a site within the existing Vogtle boundaries for the construction and operation of a new nuclear power generating facility consisting of two new nuclear reactors and ancillary facilities, and to issue an ESP for the proposed site. During this time, the site would be "banked" for up to 20 years, during which time a reactor type could be chosen, and a construction and operating license application submitted to the Nuclear Regulatory Commission.

The DEIS discusses the proposed action and alternatives. Alternatives include the construction and operation of two new reactors at the VEGP site or at one of three alternative sites. The DEIS states that none of the alternative sites were determined to be environmentally preferable to the VEGP site.

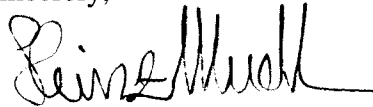
Based on EPA's review of the DEIS, we are assigning the document a rating of EC-1, meaning that the EPA review identified environmental impacts that if avoided, would more fully protect the environment. (A summary of EPA's rating definitions is enclosed.) In particular, EPA suggests that the Final EIS include additional information about potential surface water withdrawal impacts, as well as impacts to wetlands and minority populations and low-income populations.

In the Waste Confidence Rule (10 CFR 51.23), the Commission generically determined that the spent fuel generated by any reactor can be safely stored on-site for at least 30 years beyond the licensed operating life of the reactor. Ultimately, long-term radioactive waste disposition will require transportation of wastes to a permitted repository site. The DEIS notes that in the high-level waste and spent fuel disposal component of the fuel cycle, uncertainty exists with respect to regulatory limits for off-site releases of radionuclides for the current candidate repository site. We are aware of ongoing efforts to license a geological repository for long-term disposition within the first quarter of the 21st century.

Since appropriate on-site storage of spent fuel assemblies and other radioactive wastes is necessary to prevent environmental impacts, EPA believes the FEIS should provide a thorough consideration of impacts resulting from such storage. Given the uncertainty regarding ultimate disposal, on-site storage may continue for a longer term than currently expected.

Thank you for the opportunity to comment on this DEIS. Please contact Ramona McConney of my staff at (404) 562-9615, if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Heinz Mueller", with a long horizontal stroke extending to the right.

Heinz J. Mueller, Chief
NEPA Program Office

Enclosed: EPA Review and Comments
 Summary of Rating Definitions

**EPA Review and Comments on
Vogtle Electric Generating Plant Site,
Issuance of an Early Site Permit (ESP) for Construction and Operation of a
New Nuclear Power Generating Facility, NUREG-1872
Draft Environmental Impact Statement (DEIS)
CEQ No. 20070386**

Purpose & Need: The DEIS includes an assessment of the energy needs for the addition of two nuclear power reactors at the VEGP site (Section 8). An applicant may address the need for power in its Early Site Permit (ESP) application or defer the analysis until later in the permitting process. We note that Southern Nuclear Operating Company, Inc. included a discussion of the need for power in its ESP application. NRC's streamlined permitting process requires an energy needs analysis to include an alternatives assessment, in accordance with 10 CFR Part 50.

Radiation Concerns regarding Contingency for Storing Spent Nuclear Fuel On-site: Given the uncertainty involved with licensing the Yucca Mountain Nevada facility for the disposal of spent nuclear fuel, all utilities planning on constructing additional nuclear units on current sites should consider contingencies for long-term storage of waste on-site.

Future planning: The 20-year horizon under the proposed ESP should take into consideration population growth and additional stressors on air or water resources. Typically, an action that has not occurred within five years of an EIS warrants a re-evaluation to determine whether significant changes have occurred, and whether a supplemental EIS is required prior to the action proceeding. EPA believes the Final EIS should acknowledge the possible need for future NEPA review based on significant changes occurring.

Surface Water: Water pumped from the Savannah River would be used for some plant activities. The DEIS discusses the addition of a new surface water intake to provide water to the proposed facility. As noted in the DEIS, discharges to surface water require an NPDES permit.

The DEIS considers impacts resulting from surface water withdrawals during a Level 3 drought. Because areas in Georgia near the VEGP site are currently experiencing a Level 4 drought, which is likely to extend well into 2008, EPA recommends that the Final EIS evaluate the impacts of withdrawing water from the Savannah River given flows experienced during a Level 4 drought. The robustness of this analysis could be further enhanced through the inclusion of appropriate staff (*e.g.*, hydrologists, meteorologists, climatologists and others) in performing such analysis.

We also recommend that Chapter 5 of the EIS include a discussion of the radiological impacts of batch tritium releases from holding tanks to the river. The discussion should note the current agreement among the Southern Company, DOE Savannah River Site, South Carolina Department of Health and Environmental Control and Georgia Department of Natural Resources requiring that all parties be informed prior to releases from the facility's holding tanks.

Groundwater: The new facilities would use groundwater for some supply needs, with one system potentially supplying both Vogtle units 3 and 4. The DEIS notes the relatively shallow depth to groundwater in the vicinity. EPA recommends that the Final EIS include updated groundwater and surface water withdrawal and use data, (agricultural, public water supply, mining, hydroelectric, thermoelectric, industrial, commercial, etc) in the project area. These data should be used to determine if the estimated water needs for this project would exceed or adversely impact the anticipated needs of the community, thereby potentially reducing water quality or quantity.

Wetlands: The DEIS discusses potential impacts to wetlands, perennial streams, intermittent streams, and ephemeral streams. Approximately 22.5 acres of wetlands, mostly along the Savannah River, would be impacted. The Section 404 permit review process requires a compensatory mitigation plan for impacts that cannot be avoided or minimized. We recommend the Final EIS provide additional discussion of options for first, more fully avoiding and minimizing wetland impacts, and then for mitigating wetlands impacts that could not be avoided or minimized.

Monitoring: Section 2.5 refers to the Central Savannah River Area Radiological Environmental Monitoring Program Association (REMP). This program includes the DOE Savannah River Site, state radiation programs (South Carolina and Georgia), as well as the water intake station at Beaufort, South Carolina.

EPA Region 4 participates in an advisory role in the REMP, as described for the VEGP. This program ensures consistent analysis of water, air, biota, and other factors, data sharing among the parties, analysis of data trends, and multi-agency peer review.

Cumulative Impacts: We appreciate the DEIS's discussion and evaluation of cumulative impacts, which takes into consideration activities at the Savannah River Site and Plant Wilson, as well as other factors.

Environmental Justice: EPA understands the environmental justice (EJ) evaluation was conducted based on guidance from the NRC, Office of Nuclear Reactor Regulation. EPA appreciates the attention shown to EJ in the DEIS; however, EPA believes some aspects of the analysis could be improved.

The DEIS includes maps showing aggregate block groups of minority and low-income populations within a 50-mile (80 km) radius of the VEGP site. While mapping all potential EJ areas in a 50-mile radius of the site is helpful, EPA recommends that the Final EIS more clearly identify the areas that could face the most significant impacts. For example, provision of more detailed GIS or aerial maps of minority and low-income populations within close proximity to the VEGP site (*i.e.*, 0-5 miles) would be useful. The map(s) should indicate the distance of the closest residences to the current facility and the proposed expansion. Information regarding residential distribution and location relative to potential environmental effects is useful for community involvement and regulatory assessment.

EJ Assessment: EPA recommends that the Final EIS provide clarification regarding resource dependencies or practices, such as subsistence agriculture, hunting, or fishing, through which certain populations could be disproportionately affected. Low-income populations are likely to conduct such subsistence practices.

EJ Benefits and Burdens: While the DEIS discusses some potential risks and benefits of the project, EPA recommends the Final EIS include a more comprehensive discussion of potential benefits and impacts associated with the project, as it relates to minority and low-income populations and the population at large.

Impacts on real estate values, particularly on residential property of minority and/or low-income populations and commercial real estate within close proximity to the VEGP site, may be valuable as direct indicators of *economic* impacts from the site, and also useful as indirect indicators of how seriously the market views the human health and environmental effects of the site. If the residents within the immediate project area are low-income, they may not have the capacity to easily move away from the local community, if they consider the additional nuclear power facilities an unacceptable neighboring land use. EPA recommends the Final EIS include research on existing real estate appreciation and depreciation since the original facility was constructed and projected appreciation/depreciation of real estate values.

The Final EIS should also incorporate a matrix that outlines potential environmental and interrelated economic and social risks, burdens and benefits, and their associated magnitude.

EJ and Public Involvement: The Final EIS should provide a clearer description of the public participation process, particularly regarding minority and low-income populations residing in close proximity to the VEGP site and populations that are within the potential affected area.

The DEIS states that community leaders of the minority populations within the analytical area were interviewed, but does not discuss the relationship between those populations and the existing nuclear reactor. For example, the document does not give information regarding: the nature of the relationship between the existing facility and such minority and low-income populations that currently reside both in close proximity and within the potentially affected area; the perception of community residents as to whether the existing facility has been a good neighbor; any reported problems with the current facility which have generated public concern; the employment status and property values of residents in close proximity to the nuclear facility; and the level of support by local residents for the proposed expansion. If the residents have concerns, how are they being addressed? EPA recommends inclusion of this information in the Final EIS.

Public Health Impacts: The DEIS states that the nearest drinking water well to the VEGP site is located 4.9 miles away. The Final EIS should clarify whether activities at the site could impact drinking water quality or quantity from this well and other local wells in close proximity. In addition, the Final EIS should also identify the distance from the VEGP site to public drinking water intakes.

EPA recommends the Final EIS address the vicinity (in radius miles) that would be affected by accident scenarios in the Affected Environment and Operation Impacts sections.

EPA believes the Final EIS should also include a thorough discussion of accident scenarios, including: the types of potential accidents; the capacity of the local, state and federal entities to respond to such accidents (*e.g.*, Local Emergency Planning Committees, police and fire departments, state and federal agencies); and the record of the current facility regarding accident prevention (*e.g.*, results of chemical safety audits, emergency exercises, etc.).

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION*

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment